

IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Canceled).

Claim 2 (Currently Amended): An apparatus for forming a coating film, comprising:  
holding means for holding a substrate horizontally;  
a rotation mechanism configured to rotate said holding means such that the substrate held by said holding means is allowed to rotate in a horizontal plane; and

a nozzle configured to drop a coating liquid through a hole on a surface of the substrate; and

a center rod provided at a center of the hole and configured to flow the coating liquid along the inner wall of the hole; and

a spiral groove formed on an inner wall of the hole of said nozzle, the spiral groove extending to a position adjacent an exit of the nozzle and configured to gyrate the coating liquid such that the coating liquid continues to gyrate after being dropped from the nozzle.

Claim 3 (Previously Presented): An apparatus for forming a coating film, comprising:  
holding means for holding a substrate horizontally;  
a rotation mechanism configured to rotate the holding means such that the substrate held by the holding means is allowed to rotate in a horizontal plane; and

a nozzle configured to drop a coating liquid through a hole on a surface of the substrate,

a spiral groove formed on an inner wall of the hole of the nozzle, and

a center rod provided at a center of the hole and configured to flow the coating liquid along the inner wall of the hole,

wherein the nozzle is configured to drop the coating liquid with a gyration in accordance with the spiral groove.

Claim 4 (Previously Presented): The apparatus according to claim 2, wherein the spiral groove is configured such that the coating liquid and a dilution liquid configured to dilute the coating liquid supplied separately are mixed during passing said spiral groove, and the mixed liquid is given a gyrating force and is dropped from said nozzle.

Claim 5 (Currently Amended): The apparatus according to claim 2, wherein the hole is tapered toward the an exit of the nozzle ~~from which the coating liquid is dropped~~.

Claim 6 (Previously Presented): An apparatus for forming a coating film on a substrate by applying a coating liquid to the substrate, comprising:

holding means for holding the substrate horizontally;

a rotation mechanism for rotating said holding means such that the substrate held by said holding means is allowed to rotate in a horizontal plane;

a nozzle configured to drop the coating liquid through a hole on a surface of the substrate on said holding means;

a center rod provided at a center of the hole such that the coating liquid flows along an inner wall of the hole, the center rod extending to a position adjacent an exit of the nozzle;  
and

a plurality of fins disposed on the center rod and configured to flow the coating liquid in a spiral manner, the plurality of fins extending to a position adjacent the exit of the nozzle.

Claim 7 (Previously Presented): The apparatus according to claim 6, wherein the hole is configured such that the coating liquid and a dilution liquid configured to dilute the coating liquid supplied separately are mixed during passing through the hole, and the mixed liquid is given a gyrating force by said fins and is dropped from said nozzle.

Claim 8 (Currently Amended): The apparatus according to claim 6, wherein the hole is tapered toward the an exit of the nozzle ~~from which the coating liquid is dropped~~.

Claims 9-12 (Canceled).

Claim 13 (Previously Presented): An apparatus for forming a coating film on a substrate by applying a coating liquid to the substrate, comprising:

- a holder configured to hold the substrate horizontally;
- a rotation mechanism configured to rotate the holder such that the substrate held by the holder is allowed to rotate in a horizontal plane;
- a nozzle configured to drop the coating liquid on a surface of the substrate;
- a gyrating force generator configured to give a gyrating force to the coating liquid such that the coating liquid continues to gyrate after being dropped from the nozzle, the gyrating force generator extending to a position adjacent an exit of the nozzle; and
- a center rod provided at a center of the hole of the nozzle and configured to flow the coating liquid along an inner wall of the nozzle.

Claim 14 (Previously Presented): An apparatus for forming a coating film on a substrate by applying a coating liquid to the substrate, comprising:

- a holder configured to hold the substrate horizontally;

a rotation mechanism configured to rotate the holder such that the substrate held by the holder is allowed to rotate in a horizontal plane; and

a nozzle configured to drop the coating liquid through a hole on a surface of the substrate,

wherein a spiral groove is formed on an inner wall of the hole of the nozzle, and

wherein a center rod is provided at a center of the hole such that the coating liquid flows along the inner wall of the hole.

Claim 15 (Canceled).

Claim 16 (Previously Presented): The apparatus according to claim 3, wherein the spiral groove is configured such that the coating liquid and a dilution liquid configured to dilute the coating liquid supplied separately are mixed during passing said spiral groove, and the mixed liquid is given a gyrating force and is dropped from said nozzle.